

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> :	A3	(11) International Publication Number:	WO 98/20073
C08L 67/02, 67/04, 3/00, C08J 5/18		(43) International Publication Date:	14 May 1998 (14.05.98)

(21) International Application Number:	PCT/EP97/06103	(81) Designated States:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).
(22) International Filing Date:	5 November 1997 (05.11.97)		
(30) Priority Data:			
TO96A000890	5 November 1996 (05.11.96)	IT	
TO96A000996	9 December 1996 (09.12.96)	IT	
(71) Applicant (for all designated States except US):	NOVAMONT S.P.A. [IT/IT]; Via Fauser, 8, I-28100 Novara (IT).		
(72) Inventors; and			
(75) Inventors/Applicants (for US only):	BASTIOLI, Catia [IT/IT]; Via della Noce, 63, I-28100 Novara (IT). BELLOTTI, Vittorio [IT/IT]; Via Mora e Gibin, 9, I-28010 Fontaneto d'Agogna (IT). CELLA, Gian, Domenico [IT/IT]; Via Minghetti, 1, I-28100 Novara (IT). DEL GIUDICE, Luciano [IT/IT]; Piazzale Siena, 4, I-20146 Milano (IT). MONTINO, Sandro [IT/IT]; Via Bellotti, 15, I-27038 Robbio Lomellina (IT). PEREGO, Gabriele [IT/IT]; Via Voghera, 20, I-20144 Milano (IT).		
(74) Agents:	RAMBELLINI, Paolo et al.; Jacobacci & Perani S.p.A., Corso Regio Parco, 27, I-10152 Torino (IT).		

Published

*With international search report.*

*Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.*

(88) Date of publication of the international search report:

6 August 1998 (06.08.98)

(54) Title: BIODEGRADABLE POLYMERIC COMPOSITIONS COMPRISING STARCH AND A THERMOPLASTIC POLYMER

(57) Abstract

Polymeric compositions comprising thermoplastic starch and a thermoplastic polymer incompatible with starch, in which the starch constitutes the dispersed phase and the thermoplastic polymer constitutes the continuous phase, selected: A) from compositions comprising an agent with an interfacial effect selected from esters of polyols with mono- or polycarboxylic acids with dissociation constants within certain limits, the esters having specific values of the hydrophilic/lipophilic balance index HLB or being amongst the non-ionic surfactants which are soluble in water but cannot significantly be extracted by water from the compositions which contain them; B) from compositions wherein the thermoplastic polymer is an aliphatic or aliphatic-aromatic copolyester wherein the ratio (R) between the average viscometric molecular weight and the melt index is greater than 25,000 and C) from compositions wherein the thermoplastic polymer is selected from aliphatic-aromatic copolymers, polyester-amides, polyester-ethers, polyester-ether-amides, polyester-urethanes and polyester-ureas and wherein the compositions are obtained by extrusion of the component maintaining a water content during the mixing stage from 1 to 5 % by weight.